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Department of Defense  
**DIRECTIVE**  
**AD-A270 369**



August 22, 1986  
NUMBER 1430.13

ASD(FM&P)

SUBJECT: Training Simulators and Devices

- References:
- (a) Assistant Secretary of Defense Memorandum, "Guidelines for the Development and Acquisition of Training Simulators and Devices," October 5, 1984
  - (b) DoD Directive 5000.1, "Major System Acquisitions," March 12, 1986
  - (c) DoD Instruction 5000.2, "Major System Acquisition Procedures," March 12, 1986
  - (d) DoD Directive 5000.3, "Test and Evaluation," March 12, 1986
  - (e) through (i), see enclosure 1

**A. PURPOSE**

This Directive:

1. Establishes training simulator and device development, acquisition, and utilization policy implementing reference (a), in accordance with references (b) through (i).
2. Provides guidance for establishing Service policy for training simulators and devices.
3. Authorizes the Department of Defense to use training simulators and devices to make training systems more effective and to help maintain military readiness. Emphasizes the relationship between the system(s) supported and the training system and supports the requirements for coincident development and concurrency between the system(s) supported and the training system. A systematically developed training system with appropriate training simulators, devices, and embedded training capability cost-effectively provides training for any given weapon or support system. Properly used, such training simulators and devices facilitate: training that might be impractical or unsafe if done with actual systems or equipment; concentrated practice in selected normal and emergency actions; the training of operators and maintainers to diagnose and address possible equipment faults; enhanced proficiency despite shortages of equipment, space, ranges, or time; control of life-cycle training costs; and reducing systems required in maintenance training.
4. Emphasizes that training simulators and devices are integral parts of an overall training system. Those training systems without training simulators or devices specifically are excluded from this Directive.

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## B. APPLICABILITY AND SCOPE

1. This Directive applies to the Office of the Secretary of Defense (OSD) and the Military Departments, including their National Guard and Reserve components. The term "Military Services," as used herein, refers to the Army, Navy, Air Force, Marine Corps, and the National Guard and Reserve components.

2. This Directive shall not be construed to usurp management prerogatives or responsibilities of the Military Departments or their Guard or Reserve Components.

3. For reporting purposes supporting acquisition review for training simulators or devices supporting a major system or comprising nonsystem training equipment, the dollar thresholds shall be those established in DoD 7110.1-M, part II (reference (h)).

4. When the Secretary of Defense designates any training simulator or device as being of significant interest based on criteria other than cost, the Military Service concerned shall provide the documentation required by this Directive.

5. The policies of this Directive shall be followed regardless of the cost of the training simulators or devices.

6. In accordance with the responsibilities in E.O. 12344, (reference (i)) the Department of Energy (DoE) has cognizance over the development of training systems and devices used in the training of naval nuclear propulsion plant operators. Such systems and devices are not covered by this Directive, but are coordinated separately with DoE.

## C. DEFINITIONS

1. Embedded Training. Training using operational equipment that involves simulating or stimulating of equipment performance.

2. Non-System Training Device. A training simulator or device not supporting a single, specific, parent defense system.

3. Training Simulator and/or Device. Hardware and software designed or modified exclusively for training purposes involving simulation or stimulation in its construction or operation to demonstrate or illustrate a concept or simulate an operational circumstance or environment. Under this Directive, training simulators and devices are considered part of an overall training system that may or may not be identified as part of a parent defense system. Under this Directive, the term training device shall apply to training simulators and devices.

4. Training System. A systematically developed curriculum including, but not necessarily limited to, courseware; classroom aids; training simulators and devices; operational equipment; embedded training capability; and personnel to operate, maintain, or employ a system. The training system includes all necessary elements of logistic support.



Aug 22, 86  
1430.13

## D. POLICY

### 1. General

a. It is DoD policy to optimize the operational readiness of the total forces by effecting the development and acquisition of training devices, in accordance with DoD Directive 5000.1 (reference (b)). The requirement for development and acquisition of training devices shall be based on a Military Service's training requirements analysis process. The analysis shall define the training need, determine whether existing training devices shall satisfy the training requirement, and evaluate the benefits and tradeoffs of potential alternative training solutions. This process shall consider how recommended training devices shall function in the National Guard and Reserve environment and how they shall meet any unique National Guard and Reserve training needs.

b. All training devices supporting and unique to a major system acquisition should be documented and reviewed with the parent major system. Major system training devices shall be identified in the acquisition process in the Integrated Program Summary (IPS), in accordance with DoD Instruction 5000.2 (reference (c)). Those training devices that are not included in a major system acquisition should be identified and justified in relation to a specific training program or course. The Military Services shall ensure that all development, procurement, operation, and support costs are programed and funded.

c. These policies do not imply that a training system, simulator, or device must be procured from the prime contractor for the defense system being supported.

d. The acquisition of a training system that supports a new defense system or equipment shall be assigned the same priority as that of the parent system or equipment.

e. Those training devices dedicated to defense systems or equipment should be available in time for the fielding of the parent system.

f. These policies and the guidelines to implement them apply to acquisition funds from advanced development through procurement.

g. Joint-Services acquisition of common training devices should be fully considered in each Military Service's training analysis and planning.

### 2. Development Planning Guidelines

a. Once a training device requirement has been established, the training device program must be described and documented in a Military Service's-approved development plan (DP) or equivalent before development of the training device may proceed.

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b. The DP, which documents the Military Service's training requirement, must integrate the proposed, specific training device hardware or software system being developed and acquired with the training system for which it is intended.

c. The DP shall address the following items as data become available:

- (1) Assessment of training need and expected benefit from the training device(s).
- (2) Description of the training device(s).
- (3) Acquisition and modification schedule.
- (4) Ability of the training devices to maintain or improve safety.
- (5) Course and training estimates including projected student flows and loads, requirements for instructors and other staff, location of training facilities, and other training requirements.

### 3. Acquisition Guidelines

a. Training device alternatives including, but not limited to, trainers, general versus specific devices, real equipment versus simulated equipment, and embedded training capability should be evaluated by the Military Service concerned. Where applicable, economic analyses of alternatives should be conducted in accordance with the methods and assumptions in DoD Instruction 7041.3 (reference (g)). The evaluation of each alternative should consider as appropriate:

- (1) Life-cycle use versus costs.
- (2) Trade-off with requirements for munitions, if applicable.
- (3) Capability of the training device(s) to accommodate changes made to the parent defense system based on data on minimum and maximum changes made over the life cycle of similar defense systems.
- (4) Student load and curriculum changes or field application training changes anticipated during the life cycle.

b. When military specification equipment is not required to meet performance needs, commercial practices and equipment should be used to contain initial procurement and follow-on support costs. Commercially available training programs also deserve serious consideration.

c. Specifications should cover training functions, performance levels, and required proficiency.

### 4. Training Effectiveness Evaluation Guidelines

Analysis of training capability and potential should focus on data based on actual experience.



Aug 22, 86  
1430.13

## E. RESPONSIBILITIES

1. The Assistant Secretary of Defense for Force Management and Personnel (ASD(FM&P)) shall:

a. Monitor the Military Services' compliance with this Directive.

b. Designate action officers for training devices associated with major system acquisitions, constituting major systems in themselves, and non-system training devices meeting the documentation threshold. These action officers shall:

(1) Monitor the status of training devices, as assigned.

(2) Review Military Service-provided DPs.

(3) Obtain such reports and information as may be necessary in performing assigned functions, in accordance with DoD Directive 5000.19 (reference (f)).

c. Review the Military Service's Regulations, Manuals, or Instructions implementing this Directive.

d. Review the Military Service's acquisition documentation to identify areas of potential joint applicability.

e. Respond to Congressional inquiries on implementation of this Directive and results achieved.

f. Administer a continuing review of policy on training devices, updating this Directive as necessary.

2. The Head of each DoD Component shall:

a. Ensure development of the Military Service's documents implementing this Directive.

b. Ensure that the Military Service's charters for program managers of all major defense system acquisitions adequately address their training device responsibilities, and that program managers are supported by training system managers.

## F. PROCEDURES

1. OSD oversight for training devices that support a major system or constitute major systems in themselves, shall be accomplished during the system acquisition review process. Military Service-approved DPs, which will evolve as data from detailed training analyses become available, shall be forwarded to OSD not later than the Program Objectives Memorandum (POM) submission in which budget year funds are requested for manufacture of the initial or prototype device(s), but in no case before the milestone listed in paragraph F.1.a., or b., below. Service changes to the DP shall be submitted to OSD as changes occur.



a. DPs for training devices integral to a major system acquisition shall be submitted to support the Decision Coordinating Paper/Integrated Program Summary of the parent defense system by Milestone II.

b. For training devices designated major systems acquisitions, DPs shall be submitted with, or incorporated into, the System Concept Paper prepared for Milestone I.

c. For non-system training devices, DPs shall be submitted not later than the POM submission in which budget year funds are requested for manufacture of the prototype or the first device.

2. Training Effectiveness Evaluation Plan (TEEP)

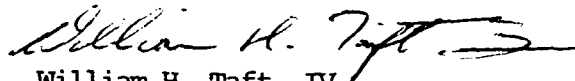
a. The Training Effectiveness Evaluation Plan shall be developed as applicable with regard to DoD Directive 5000.3 (reference (d)), to ensure that acquired training devices meet the Military Service's training requirements and effectiveness levels. The TEEP shall describe the Service's plan to accomplish training effectiveness evaluations, to the extent the Services deem appropriate, for training devices associated with each major defense system acquisition, training devices constituting major systems in themselves or non-system training devices that meet the threshold described in section B., above.

b. The TEEP should document the planned evaluation of the training functions, performance levels, and proficiency requirements incorporated in the specifications. The TEEP should be approved by the sponsoring Service at least 6 months before the planned commencement of training effectiveness evaluation.

c. For training devices not meeting thresholds described in section B., above, the Military Services are encouraged to prepare, approve, and support a TEEP at least 6 months before the planned commencement of training effectiveness evaluation.

G. EFFECTIVE DATE AND IMPLEMENTATION.

This Directive is effective immediately. Forward one copy of each implementing document to the Assistant Secretary of Defense (Force Management and Personnel). Management reports and information specified herein shall be submitted for training devices reaching the stated milestones beginning with FY 87 as required by the ASD memorandum in reference (a). Requirements shall be waived on a case-by-case basis for training devices for which this implementation date shall cause inordinate cost or manpower expenditures.

  
William H. Taft, IV  
Deputy Secretary of Defense

Enclosure - 1

1. References



Aug 22, 86  
1430.13 (Encl)

References, continued

- (e) DoD Directive 5000.39, "Acquisition and Management of Integrated Logistic Support for Systems and Equipment," November 17, 1983
- (f) DoD Directive 5000.19, "Policies for the Management and Control of Information Requirements," March 12, 1976
- (g) DoD Instruction 7041.3, "Economic Analysis and Program Evaluation for Resource Management," October 18, 1972
- (h) DoD 7110.1-M, "Budget Guidance Manual," July 1985, authorized by DoD Instruction 7110.1, October 30, 1980
- (i) Executive Order 12344, February 1, 1982, as codified in Public Law 98-525, October 19, 1984